

**Background Information and Technical Support Document for
Proposed Adoption of:**

**310 CMR 7.70
“Massachusetts CO₂ Budget Trading Program”**

and Amendments to:

310 CMR 7.00 et seq.:

**310 CMR 7.29
“Emissions Standards for Power Plants”**

and

**310 CMR 7.00: Appendix B(7)
“Emission Banking, Trading, and Averaging”**

**Regulatory Authority:
M.G.L. c. 111, Sections 142A through 142E**

July 2007

TABLE OF CONTENTS

I.	INTRODUCTION	3
II.	BACKGROUND and PURPOSE	4
A.	Overview	4
B.	The Greenhouse Effect and the Changing Climate	4
C.	Projected Impacts of Climate Change in the Northeast	5
D.	Reasons for Massachusetts to Implement the CO ₂ Budget Trading Program	5
III.	DESCRIPTION of the PROPOSED MASSACHUSETTS CO ₂ BUDGET TRADING PROGRAM	6
A.	Overview	6
B.	Cap-and-Trade Program Structure.....	7
C.	Applicability	7
D.	Size and Structure of Cap	8
E.	Allocation	8
F.	Temporal Flexibility Mechanisms.....	8
G.	Opt-ins.....	9
H.	Offsets or Project Based Reductions.....	10
I.	Price Triggers	10
J.	Allowance Retirement for Voluntary Renewable Energy Purchases	11
K.	Monitoring	11
L.	Permitting	12
M.	Imports and Leakage.....	13
IV.	Economic Impacts.....	13
V.	DESCRIPTION of PROPOSED AMENDMENTS to 310 CMR 7.29 and 310 CMR 7.00: Appendix B(7).....	14
A.	Review of Existing Regulations	14
B.	CO ₂ Emissions Standard Applicability and GHG Credit Eligibility	14
C.	Deadline for Compliance Demonstration	15
D.	Transition Provisions – CO ₂ Budget Trading Program Ineligible Projects	15
E.	Transition Provisions – CO ₂ Budget Trading Program Eligible Projects	16
F.	Geographic Scope.....	16
VI.	Request for Comments	17
VII.	Agricultural Impacts.....	17
VIII.	Impact on Massachusetts Municipalities	17
IX.	Massachusetts Environmental Policy Act.....	18
X.	Impacts on Other Programs – Air Toxics	18
XI.	Public Participation	18

I. INTRODUCTION

On January 18, 2007, Massachusetts Governor Deval Patrick signed the Regional Greenhouse Gas Initiative (RGGI) Memorandum of Understanding (MOU),¹ committing the Commonwealth to propose a carbon dioxide (CO₂) cap-and-trade program substantially as reflected in the RGGI Model Rule.^{2,3} RGGI is an ongoing effort (which commenced in September 2002) among Northeast and Mid-Atlantic States⁴ to develop and implement a regional CO₂ cap-and-trade program aimed at stabilizing and then reducing CO₂ emissions from large fossil-fuel-fired electricity generating units in the region. This effort has pooled the expertise of environmental and energy professionals in the government, private, and nonprofit sectors through an extensive public process.

MassDEP held four public meetings in March and April of 2007 to solicit feedback from stakeholders regarding the development of these regulations. MassDEP is proposing the Massachusetts CO₂ Budget Trading Program (310 CMR 7.70), which implements the Massachusetts portion of the regional CO₂ cap-and-trade program, thereby fulfilling the Commonwealth's commitments under the RGGI MOU.

Beginning on January 1, 2009, the Massachusetts CO₂ Budget Trading Program will regulate CO₂ emissions from fossil-fuel-fired units that serve an electric generator with a nameplate capacity 25 megawatts (MW) or greater (CO₂ budget units). As of June 2007, there were 32 sources in Massachusetts with CO₂ budget units. To demonstrate compliance with the CO₂ Budget Trading Program, CO₂ budget units must provide one CO₂ allowance for each ton of CO₂ emitted during each compliance period. The program establishes a state budget for Massachusetts of 26,660,204 CO₂ allowances (or 26,660,204 tons of CO₂) for each year 2009 through 2014. Beginning in 2015, the Massachusetts budget will decrease by 2.5 percent per year through 2018. Consistent with Governor Deval Patrick's policy announcement at the MOU signing, MassDEP is proposing to auction nearly 100% of its CO₂ allowances. Procedures for auctioning allowances will be governed by regulations promulgated by the Division of Energy Resources (DOER).⁵

MassDEP proposes to replace the CO₂ emissions standards of 310 CMR 7.29 with the cap-and-trade provisions of the Massachusetts CO₂ Budget Trading Program as of January 1, 2009. 310 CMR 7.29 is a four-pollutant regulation, promulgated in May 2001, that affects the six highest emitting electric generating facilities in Massachusetts.⁶ As per the provisions of 310 CMR 7.29, the six affected facilities must comply with their CO₂ emissions standards directly out-of-stack, or use Massachusetts GHG Credits, which can be created for projects that reduce, avoid, or sequester emissions of GHGs according to the procedures established by 310 CMR 7.00: Appendix B(7).^{7,8} To facilitate the transition to the CO₂ Budget Trading Program, MassDEP is also proposing amendments to 310 CMR 7.29 and 310 CMR 7.00: Appendix B(7) that would streamline implementation and allow for the exchange of certain unused Massachusetts Greenhouse Gas (GHG) Credits for CO₂ Budget Trading Program CO₂ allowances.

¹ <http://rggi.org/agreement.htm>

² <http://rggi.org>

³ For more information regarding the Model Rule see Section III.A. of this document.

⁴ As of July 2007, RGGI MOU signatory states include: Connecticut, Delaware, Maine, Maryland, Massachusetts, New Hampshire, New Jersey, New York, Rhode Island, and Vermont.

⁵ As proposed in 225 CMR 13.00, which is being made available for public comment concurrently with this proposal.

⁶ <http://www.mass.gov/dep/bwp/daqc/files/regs/finalrsn.doc>

⁷ In the event that certain triggers are met, facilities can also comply by making payments into an Expendable Trust. As of June 30, 2007, none of these triggers have been met.

⁸ The six power generation facilities in Massachusetts affected by 310 CMR 7.29 are: Brayton Point, Salem Harbor, Mystic, Canal, Mt. Tom, and NRG Somerset.

II. BACKGROUND and PURPOSE

A. Overview

Overwhelming scientific evidence suggests that a changing climate poses a serious threat to environmental resources as well as the public health because it threatens the region's air quality, water quality, marine and freshwater fisheries, salt and freshwater wetlands, surface and subsurface drinking water supplies; river and stream impoundment infrastructure; forest species and wildlife habitats.⁹ MassDEP is proposing to adopt the CO₂ Budget Trading Program to reduce the Commonwealth's contribution to Climate Change in a manner intended to produce significant environmental co-benefits in the form of improved local air quality, forest preservation, and improved agricultural practices leading to better water and air quality in rural areas of the State.

B. The Greenhouse Effect and the Changing Climate

A naturally occurring greenhouse effect has regulated the earth's climate system for millions of years. Solar energy from the sun that reaches the surface of the earth is radiated back out into the atmosphere as long wave or infrared radiation. CO₂ and other naturally occurring GHGs reflect that radiation, effectively trapping heat in our atmosphere. These gases maintain the average temperature of the planet at approximately 50 degrees Fahrenheit above what it would be otherwise.

An enhanced greenhouse effect, and associated climate change, results as large quantities of GHGs, especially anthropogenic GHGs such as CO₂ from the burning of fossil fuels, are added to the atmosphere. Concentrations of CO₂ have increased by one-third since the Industrial Revolution, and are higher than at any time in the last 800,000 years. There is clear scientific consensus that anthropogenic emissions of CO₂ from the burning of fossil fuels are contributing to the observed warming of the planet. This consensus is reflected in the June 7, 2005, joint statement of the United States National Academies of Science and national academies from 10 other industrial nations.¹⁰ These science academies reached a number of important conclusions about the science and the need for governments to respond by reducing emissions:

- There is strong evidence that the climate is warming (the evidence comes from direct measurements of rising surface air and subsurface ocean temperatures, increases in sea levels, retreating glaciers and changes to many physical and biological systems);
- The earth's average temperature has already risen by just over 1 degree Fahrenheit;
- Most of the warming in recent decades can be attributed to human activities;
- The scientific understanding of climate change is now sufficiently clear to justify taking action to reduce GHG emissions;
- Action taken now to reduce emissions will reduce the magnitude and rate of climate change;
- Any remaining uncertainty about the science is not sufficient to warrant further delay in action to reduce GHG emissions; and,
- Any delay in acting will increase the risk of adverse effects of climate change, and will likely incur a greater cost.

The Intergovernmental Panel on Climate Change (IPCC)¹¹ recently released its Fourth Assessment, which concluded that climate change is occurring, and that it is very likely due to increases in anthropogenic emissions of greenhouse gases.¹²

⁹ <http://www.ipcc.ch/>

¹⁰ Joint Science Academies' Statement: Global Response to Climate Change, issued June 7, 2005, and available at <http://www.nationalacademies.org/onpi/06072005.pdf>.

¹¹ The Intergovernmental Panel on Climate Change (IPCC) was established by the World Meteorological Organization and the United Nations Environment Program (UNEP) to assess scientific, technical and socio- economic information relevant to the understanding of climate change, its potential impacts, and options for adaptation and mitigation

C. Projected Impacts of Climate Change in the Northeast

In October 2006, the Northeast Climate Impacts Assessment¹³ (a collaboration between the Union of Concerned Scientists and a team of independent experts) published “Climate Change in the U.S. Northeast.”¹⁴ The report noted that the Northeast region’s familiar climate is already changing in noticeable ways: temperatures have been rising, particularly in winter, and the number of extremely hot days in summer has been increasing. Under a “higher-emissions” scenario, in which the society remains on a pathway of fossil fuel dependent economic growth (with heat-trapping emissions from automobiles, power plants, and industries continuing to increase through the end of the century), projections for the Northeast show that:

- By the end of this century, winters could warm by 8 to 12°F and summers by 6 to 14°F;
- By mid-century, cities such as Philadelphia, New York City, and Boston could experience 30 to 60 days of temperatures over 90° F each summer, compared to a historical average of 10-15 days each summer;
- By the end of the century, the length of the winter snow season could be cut in half as more precipitation falls as rain, and less as snow
- By the end of the century, short-term droughts (lasting one to three months) could occur as frequently as once per year over much of the Northeast;
- By the end of the century, the character of the seasons could change significantly, with spring arriving three weeks earlier, summer lengthening by about three weeks at both its beginning and end, fall becoming warmer and drier, and winter becoming shorter and milder; and,
- By mid-century, sea-level could rise anywhere from a few inches to more than one foot.

D. Reasons for Massachusetts to Implement the CO₂ Budget Trading Program

Massachusetts’ first effort to regulate CO₂ emissions from electric generating units came in May 2001 as part of multi-pollutant regulations affecting the six highest emitting power plants in the Commonwealth.¹⁵ These regulations, 310 CMR 7.29, *Emission Standards for Power Plants*,¹⁶ require affected facilities to meet annual CO₂ emissions cap standards beginning January 1, 2006, and an annual CO₂ rate standard of 1,800 pounds CO₂ per megawatt hour beginning January 1, 2008. These CO₂ emissions standards are facility-specific, unlike the proposed CO₂ Budget Trading Program, which is a cap-and-trade program (see section III.B. of this document for greater detail). This means that affected facilities must meet their CO₂ emissions standards directly out-of-stack, unless they use the flexibility mechanisms established by 310 CMR 7.00: Appendix B(7) Greenhouse Gas Credit Banking and Trading (promulgated in September 2006). Appendix B(7) provides facilities with the ability to comply with their CO₂ emissions standards by reducing, avoiding, or sequestering emissions of greenhouse gases.

MassDEP proposes to replace the facility-specific CO₂ emissions standards of 310 CMR 7.29 with the CO₂ Budget Trading Program, a cap-and-trade program that should provide greater compliance flexibility in the long-term. This program has a broader applicability than 310 CMR 7.29, affecting 32 Massachusetts facilities. MassDEP believes that implementing the CO₂ Budget Trading Program will provide the following benefits to Massachusetts:

¹² <http://www.ipcc.ch/>

¹³ <http://www.northeastclimateimpacts.org/>

¹⁴ http://www.climatechoices.org/assets/documents/climatechoices/NECIA_climate_report_final.pdf

¹⁵ Pollutants covered by those regulations include: sulfur dioxide, nitrogen oxides, carbon dioxide and mercury.

¹⁶ <http://www.mass.gov/dep/bwp/daqc/files/regs/729final.doc> and <http://www.mass.gov/dep/bwp/daqc/files/regs/finalrtc.doc>

- Reduce the long-term costs of addressing climate change. By acting now, Massachusetts may be able to avoid more disruptive measures later.¹⁷
- Capture environmental co-benefits. Reducing carbon emissions from the electric generators could lead to reductions in the emissions of other pollutants associated with fossil fuel-based electricity generation (e.g., NO_x, SO₂, and Mercury). Additional co-benefits could be realized through the offsets component of the program, which would provide incentives for: afforestation, improved agricultural manure management, and reduced consumption of natural gas, propane, and home heating oil. The auction of allowances will generate revenue that can be used to benefit the environment and energy planning (e.g., through investments in energy efficiency and clean energy technologies).
- Drive new technology. By establishing a cost for emitting CO₂, the CO₂ Budget Trading Program will provide a market incentive for developing and deploying technologies that improve the fuel efficiency of electric generation, generate electricity from non-carbon emitting resources (e.g., wind and solar power), and reduce CO₂ emissions from combustion sources.
- Promote expanded energy efficiency. The offsets provisions provide incentives for end-use efficiency improvements. In addition, auction proceeds could be used for other energy efficiency programs in the Commonwealth.
- Stimulate economic development. Massachusetts is already a leader in clean energy technology as it is home to 556 companies, with 14,400 jobs, in energy efficiency, renewable energy, and clean energy consulting.¹⁸ The CO₂ Budget Trading Program will reinforce this leadership by encouraging the growth of clean energy technologies in the region. This stimulus will be applied indirectly by establishing a cost for carbon emissions, and directly through programs funded by the auctioning of CO₂ allowances.

III. DESCRIPTION of the PROPOSED MASSACHUSETTS CO₂ BUDGET TRADING PROGRAM

A. Overview

MassDEP's CO₂ Budget Trading Program is based on the Model Rule, which was developed to provide guidance and consistency to RGGI MOU signatory states as they implement the program detailed in the RGGI Memorandum of Understanding (MOU)¹⁹. The RGGI MOU states that "Each of the Signatory States commits to propose the Program substantially as reflected in the Model Rule²⁰." The Model Rule provides flexibility regarding: applicability; exemptions; allocations; permitting; whether or not to include a set-aside for voluntary renewable energy purchases; and, whether or not to include a behind-the-meter exemption. MassDEP's proposals regarding these areas are explained in the pages that follow.

¹⁷ Note that when ranked against the nations of the world, RGGI MOU-signatory states represent one of the ten largest sources of carbon dioxide emissions from energy use

¹⁸ http://www.mass.gov/envir/press/pressreleases/061107_roundtable.pdf

¹⁹ The Memorandum of Understanding (MOU) was signed by the Governors of the participating states and outlines the program in detail, including the framework for a Model Rule. The states made substantial revisions to the draft model rule in response to public comments. As a result, an amendment to the MOU was agreed to and signed by the heads of the energy regulatory and environmental agencies in each participating state. <http://rggi.org/agreement.htm>

²⁰ The RGGI Model Rule does not supplant any state regulatory or legislative efforts, but instead facilitates them by including the types of provisions necessary to implement RGGI. The RGGI Model Rule does so in a way that preserves state sovereignty and provides certainty and consistency to the regulated community and to the public.

B. Cap-and-Trade Program Structure

A cap-and-trade program is a flexible, market-based approach to achieving real emissions reductions at the lowest possible cost. Under a cap and trade system:

- A Region-wide, annual limit for the regulated pollutant is established (the cap);
- Each year allowances in a quantity equal to the cap are distributed (An allowance is a limited authorization to emit a given quantity of the regulated pollutant; for the CO₂ Budget Trading Program - one ton of CO₂);
- Regulated sources and other participants can buy, sell, or trade allowances in the market;
- Regulated sources are required to monitor, record, quality assure, quality control, and report emissions data during each compliance period (for the CO₂ Budget Trading Program, the control period is initially set at three years, though this may be extended to four years in the event a stage two trigger event occurs – see Section III.I of this document) ;
- Sources are required to transfer into their compliance account allowances equal to their emissions during the compliance period, by the allowance transfer deadline, for deduction by MassDEP; and,
- Sources with insufficient allowances in their compliance account at the compliance deadline date are deemed to be out of compliance, and are subject to penalty provisions.

C. Applicability

MassDEP proposes to adopt the applicability criteria established by the Model Rule and thus to require fossil-fuel-fired units serving a generator of 25 MW or greater to comply with the CO₂ Budget Trading Program. Note that once a unit triggers applicability under the CO₂ Budget Trading Program, that unit will remain subject to the CO₂ Budget Trading Program, regardless of changes to the unit. Regionally, units of this size are responsible for over 95% of CO₂ emissions from the electric generation sector.

The definition of “fossil-fuel-fired” varies depending on when a unit commences operation. A unit that commences operation on or after January 1, 2005 is considered fossil fuel-fired provided that fossil fuel comprises more than 5% of its total annual heat input. A unit that commenced operation prior to January 1, 2005 is considered to be fossil fuel-fired if fossil fuel comprises more than 50% of its total annual heat input.

CO₂ emissions attributable to the combustion of eligible biomass at a CO₂ budget unit can be deducted from that unit’s CO₂ compliance obligation. Eligible biomass includes sustainably harvested woody and herbaceous fuel sources that are available on a renewable or recurring basis (excluding old-growth timber), including dedicated energy crops and trees, agricultural food and feed crop residues, aquatic plants, unadulterated wood and wood residues, animal wastes, other clean organic wastes not mixed with other solid wastes, biogas, and other neat liquid biofuels derived from such fuel sources. Determinations as to what constitutes sustainably harvested biomass shall be made by MassDEP.

The Model Rule also contains an optional provision that, if included, allows a unit with a permit that restricts the source from selling more than 10% of its net generating capacity to the grid to apply for an exemption from the CO₂ Budget Trading Program. Any exempt unit that sells more than 10% of its net generating capacity to the grid in any year following receipt of the exemption would be subject to the CO₂ Budget Trading Program and would not be eligible to reapply for this exemption. If a state chose to include this optional provision and to grant such an exemption, it would be required to adjust its overall state CO₂ budget downward. MassDEP believes that fossil-fuel-fired units serving an electric generator with a nameplate capacity 25 MW or greater should comply with the CO₂ emissions requirements of the CO₂ Budget Trading Program even if they sell no more than 10% of their net electric generating capacity to the grid. Therefore, MassDEP’s proposal does not include this exemption in its CO₂ Budget Trading Program. However, MassDEP solicits comment regarding whether or not this exemption should be included in 310 CMR 7.70.

D. Size and Structure of Cap

The RGGI MOU calls for signatory states to stabilize power sector CO₂ emissions over the first six years of program implementation (2009-2014) at a level roughly equal to recent historical emissions (i.e., 188 million tons of CO₂ for the 10 RGGI MOU signatory states), before initiating an emissions decline of 2.5% per year for the four years 2015 through 2018. This approach will result in a 2018 annual emissions budget that is 10% smaller than the initial 2009 annual emissions budget. This phased approach with modest emissions reductions is intended to provide market signals and regulatory certainty so that electricity generators begin planning for, and investing in, lower-carbon alternatives throughout the region without inducing dramatic rate impacts. The RGGI-MOU apportions CO₂ allowances among signatory states based largely on historical emissions. MassDEP proposes to adopt the state budget provided in the RGGI MOU.

Year	MA Annual Budget
2009-2014	26,660,204
2015	25,993,699
2016	25,343,856
2017	24,710,260
2018	24,092,504

E. Allocation

MassDEP proposes to auction nearly 100% of its CO₂ allowances. To facilitate the transition from existing regulations 310 CMR 7.29, MassDEP proposes to set-aside a small amount (approximately 1%, or 266,602 CO₂ allowances) of CO₂ allowances from 2009 through 2012 allowance years (for more information, see Section IV). MassDEP also proposes to retire allowances for voluntary purchases of qualified renewable energy (see Section III.J. of this document).

CO₂ allowances are expected to be auctioned by the Division of Energy Resources (DOER), its agent, or MassDEP's agent. DOER does not require additional regulations to participate in a regional auction. However, DOER is proposing regulations, 225 CMR 13.00, that would establish auction procedures in the event that a Massachusetts-only auction is pursued. DOER's proposed regulations may be found at: <http://www.mass.gov/doer/>

At the earliest practical date, and no later than January 1, 2009, MassDEP will allocate and subsequently transfer allowances into the GHG Credit Exchange Set-aside Account and the Massachusetts Auction Account (for auction) for the years 2009, 2010, 2011 and 2012. By January 1 of each succeeding year, MassDEP will allocate and transfer allowances into the Massachusetts Auction Account for the year three years into the future.

F. Temporal Flexibility Mechanisms

Overview

MassDEP proposes to adopt the temporal flexibility mechanisms included within the Model Rule. Temporal flexibility mechanisms within a cap and trade system provide sources regulated under the cap the ability to utilize (i.e., surrender for compliance purposes) allowances allocated for years other than the current year. Providing such flexibility allows the market to spread the impacts of factors that can affect sector wide emissions (such as an unusually hot summer or cold winter, or a short term fuel price spike) over a longer period of time. As such, temporal flexibility mechanisms should lessen allowance price variance and stabilize the market. Below, MassDEP reviews the temporal flexibility mechanisms included in the proposed regulation (i.e., banking, extended compliance period, and early reduction allowances). Borrowing is not included in the model rule, and MassDEP is not proposing to include borrowing.

Banking

The Model Rule provides for the banking of allowances with no restrictions. Banking provides facilities with the ability to carry over unused allowances from a current compliance period into future compliance periods. This allows facilities to create a “rainy day” fund that can be used in future years to cover higher than expected emissions. Therefore, banking should provide lower allowance prices and allowance price stability while providing an incentive to be frugal with current year allowances in order to hedge future years’ emissions uncertainty. Banking is permitted under the Federal Acid Rain Program, the NO_x SIP Call, and the Clean Air Interstate Rule (CAIR).

Borrowing

The Model Rule does not provide for borrowing of allowances. Borrowing is using allowances allocated for future years in the current year. Borrowing allowances from future years carries a risk of default, which, if it were to occur, would undermine the environmental benefits of the program if the source in default fails to surrender allowances equal to its emissions. That risk can be minimized by limiting the time into the future from which allowances could be borrowed, or by limiting the percentage of a current year’s obligation that could be satisfied by future year allowances. However, adequately dealing with these concerns would require added administrative complexity, and therefore it was determined that similar flexibility would be better provided through a multi-year compliance period (see below).

Extended Compliance Period

The Model Rule provides for a three-year compliance period. This compliance period can be extended to four years in the event of a stage two trigger event (see Section III.I of this document). Since cumulative load over many years is the issue with respect to CO₂ emissions, long compliance periods were employed to provide regulated facilities more flexibility to adjust to variations in meteorology, fuel price spikes, clean unit outages, etc. A longer compliance period may also lead to resource (administrative) savings for the regulated facilities and the states implementing the program.

Early Reduction Allowances

MassDEP is proposing to adopt the Early Reduction Allowance (ERA) provisions of the Model Rule. ERAs are intended to provide an incentive for facilities to take actions to reduce CO₂ sooner than otherwise would be required by granting allowances for qualifying reductions made before the CO₂ Budget Program start date. Early Reduction Allowances are granted directly to the CO₂ budget source, are not included in the auction, and are in addition to the cap. To be eligible to receive ERAs, a CO₂ budget source must submit an ERA application no later than May 1, 2009 demonstrating:

- An absolute reduction in the mass of CO₂ emitted during the early reduction period (the three years 2006, 2007, and 2008), relative to the baseline period (the three years 2003, 2004, 2005 – the three years immediately preceding the early reduction period); and,
- A reduction in the average CO₂ emissions rate resulting from electric energy output and thermal energy output for all the CO₂ Budget Units at the CO₂ Budget Source during the early reduction period relative to the baseline period.
- Facility shut-downs are not eligible for Early Reduction Allowances.

G. Opt-ins

The Massachusetts CO₂ Budget Trading Program, like the RGGI Model Rule, does not allow sources not covered under the cap to “opt-in” to the program. The decision to not include opt-in provisions was made because any potential benefits of including such provisions was outweighed by the administrative complexities of: determining the source baseline, adjusting the state trading budget, and approving monitoring plans for any opt-in source.

H. Offsets or Project Based Reductions

MassDEP proposes to adopt the offsets provision of the Model Rule, which provides compliance flexibility by awarding CO₂ offset allowances to projects that reduce and/or sequester emissions of greenhouse gases. CO₂ offset allowances may be used to satisfy a limited fraction of a source's compliance obligation. Initially, the use of CO₂ offset allowances is constrained to 3.3% of a unit's total compliance obligation, though this may be expanded to 5% and 10% if a stage I or II trigger event occurs, respectively (see Section III.I).

In order to ensure that the CO₂ offset allowances awarded represent CO₂ equivalent emission reductions or carbon sequestration that are real, additional, verifiable, enforceable, and permanent, highly prescriptive standards were developed for specific project categories. At this time, only the following five project categories are eligible for CO₂ offset allowances:

- Landfill methane capture and destruction;
- Reduction in emissions of sulfur hexafluoride (SF₆);
- Sequestration of carbon due to afforestation;
- Reduction or avoidance of CO₂ emissions from natural gas, oil, or propane end-use combustion due to end-use energy efficiency; and,
- Avoided methane emissions from agricultural manure management operations.

The initial list of project categories was selected with consideration of: expected offset supply within the borders of RGGI MOU signatory states; the relative ease of developing standards; and, the likelihood of mandatory greenhouse gas regulations for that sector. MassDEP will continue to work with RGGI MOU signatory states to develop methodologies for evaluating new offset project categories.

Eligible offset projects may be located in: any participating state; or any other state or U.S. jurisdiction in which a cooperating regulatory agency has entered into a MOU with MassDEP to carry out certain obligations relative to CO₂ emissions offset projects in that state or U.S. jurisdiction.

Eligible offset projects must go through a two-step application process and must be verified after both steps by a MassDEP accredited, independent, third party verifier. The first step is the Consistency Determination, whereby MassDEP determines whether the project meets the eligibility criteria. The second step is monitoring and verification, which requires the applicant to demonstrate the precise amount of greenhouse gas emissions reduced or sequestered before offset allowances are granted.

I. Price Triggers

MassDEP proposes to adopt the price trigger provisions of the Model Rule, which provide additional compliance flexibility and price dampening in the event of higher allowance prices in two distinct stages.

A stage one trigger event occurs if the twelve-month average CO₂ allowance price is equal to or greater than the stage one trigger price. The stage one trigger price is set at \$7 in 2005 dollars, and will be adjusted up or down each year according to the consumer price index.

In the event that a stage one trigger event occurs, CO₂ budget units will be able to expand their use of CO₂ offset allowances from 3.3% of their compliance obligation to 5% of their compliance obligation.

A stage two trigger event occurs if the twelve-month average CO₂ allowance price is equal to or greater than the stage two trigger price. The stage two trigger price is set at \$10 in 2005 dollars, and will be adjusted up or down each year according to the consumer price index plus two percent.

If a stage two trigger event occurs:

- CO₂ budget units will be able to use CO₂ offset allowances to satisfy 10% of their compliance obligation;
- The compliance period will be extended to four years; and,
- MassDEP will award CO₂ offset allowances for the permanent retirement of greenhouse gas allowances or credits that have been issued pursuant to any governmental mandatory carbon constraining program outside the United States that places a specific tonnage limit on greenhouse gas emissions and are acceptable for use in that program at the time of application under 310 CMR 7.70, or have been certified greenhouse gas emissions reduction credits pursuant to the United Nations Framework Convention on Climate Change (UNFCCC) or protocols adopted through the UNFCCC process.

The price trigger provisions include a 14-month market settling period, which commences at the start of each new compliance period. The twelve-month averages used to calculate the stage one and stage two trigger events cannot include the 14-month market settling period. Therefore, the earliest that either trigger event can occur is 26 months after the commencement of a compliance period.

Calculations of trigger prices, and determinations as to whether or not a stage one or stage two trigger event has occurred, will be performed by MassDEP or its agent, in consultation with RGGI MOU-signatory states.

J. Allowance Retirement for Voluntary Renewable Energy Purchases

In order to promote and increase support for renewable energy and to encourage citizens to voluntarily purchase electricity that has a demonstrated greenhouse gas benefit, MassDEP and DOER are proposing to retire CO₂ allowances from the state CO₂ budget for voluntary purchases of qualified renewable energy.

Imposing a cap on carbon dioxide creates incentives for generating electricity in ways that do not emit carbon dioxide (e.g., renewable energy). However, in a capped environment, the development of new renewable electric generation facilities does not inherently reduce the emissions of carbon dioxide associated with electric generation. This is because the production of electricity by non-carbon emitting sources does not lower the cap and the number of allowances auctioned. Therefore, other electric generators can continue to emit carbon dioxide as long as CO₂ allowances are available. Under this scenario, additional electric generation by renewable sources could make it easier for carbon dioxide emitting electric generators to meet the cap, which could affect generator dispatch order as well as the development of CO₂ mitigation strategies.

To remedy this situation, MassDEP and DOER propose to retire up to 200,000 CO₂ allowances per year from the state budget for voluntary purchases of qualified renewable energy. Renewable energy purchases would qualify for this retirement if an Energy Service Company purchases Massachusetts RPS-eligible Renewable Energy Certificates on behalf of retail customers in Massachusetts who voluntarily agree to purchase “clean” energy. The purchase of Massachusetts RPS-eligible Renewable Energy Certificates for purposes of meeting Renewable Portfolio Standards will not be eligible for this program. Depending on the annual average marginal CO₂ emission rate for electric generation, as determined by the Independent System Operator (ISO) of New England, the retirement of 200,000 tons of CO₂ allowances could account for roughly 300,000 to 400,000 MWh of qualified renewable energy.

MassDEP and DOER are proposing to adopt provisions to reward voluntary purchases of qualified renewable energy that are similar to the optional provisions of the RGGI Model Rule, though the mechanics differ. Procedures for assessing eligibility and calculating the number of CO₂ allowances to be retired will be established by the DOER at 225 CMR 13.00.

K. Monitoring

The monitoring section of 310 CMR 7.70 requires the owners and operators and/or the CO₂ Authorized Account Representative or Alternate Authorized Account Representative for each CO₂ Budget Unit to install and certify

monitoring systems and to collect, record, quality-assure and report data necessary to quantify CO₂ mass emissions from that unit. The monitoring provisions contained in 310 CMR 7.70 are based upon the monitoring provisions of the Federal Acid Rain Program, and contain many references to those provisions (40 CFR Part 75).

Those sources subject to 310 CMR 7.70 that are also subject to the Acid Rain Program are already required by the Acid Rain Rules to monitor, record and report CO₂ mass emissions annually. Those sources subject to 310 CMR 7.70 that are not acid rain sources are subject to the Clean Air Interstate Rule, which requires sources to report mass emissions of oxides of nitrogen on an annual basis. Since the physical equipment necessary to monitor emissions of oxides of nitrogen on an annual basis is also capable of monitoring for CO₂ mass emissions, the Data Acquisition and Handling Systems would need modification to quantify CO₂ mass emissions (additional programming with the additional formulas relative to CO₂). Mass DEP and other states are currently working with the Clean Air Markets Division of the United States Environmental Protection Agency to determine if USEPA will accept and perform quality assurance data checks on CO₂ mass emission monitoring data from non-Acid Rain Program subject sources.

The monitoring provisions include deadlines and procedures for the initial certification of, and, under certain circumstances, the recertification of Continuous Emission Monitoring Systems. Acid Rain Program subject sources that have already certified monitoring systems will not require initial certification but may require recertification if, for example, changes to the monitoring system trigger such recertification.

The monitoring section establishes procedures to apply conservative missing data routines in the event that a monitoring system fails to meet quality assurance and quality control requirements.

The monitoring section contains specific provisions regarding:

- Requirements to provide heat input data;
- Requirements to provide net output data;
- Procedures for filing petitions for alternative monitoring plans; and,
- Deducting CO₂ emissions associated with the combustion of eligible biomass from a CO₂ budget unit's total CO₂ emissions. (At this time, procedures have not yet been developed for deducting CO₂ emissions associated with the combustion of liquid biomass. The GHG emissions benefits of combusting liquid biofuels can vary significantly due to the wide range of liquid biofuels production processes. MassDEP and the RGGI MOU signatory states are jointly researching the appropriate manner of addressing liquid biofuels, and MassDEP solicits comment on this issue.)

L. Permitting

The proposed regulations require each CO₂ budget source to have an approved CO₂ budget emission control plan (ECP). The purpose of the CO₂ budget ECP is to define CO₂ emissions and net energy output monitoring procedures for a particular CO₂ budget source. Although EPA does not currently require annual net energy output monitoring under 40 CFR Part 72 or Part 75, MassDEP is proposing to allow CO₂ budget sources that are subject to the Acid Rain Program to submit as part of their CO₂ budget ECP a statement that they already have an output monitoring plan in place that meets the requirements in 310 CMR 7.70. CO₂ budget sources that are not subject to the Acid Rain Program must include in their ECP a detailed emissions monitoring plan that meets the requirements in 310 CMR 7.70. Sources must also include in their CO₂ budget ECP a detailed output monitoring plan unless they already have an approved output monitoring plan under the NO_x Budget Program (310 CMR 7.28) or Mass CAIR (310 CMR 7.32), in which case they need to include a statement to that effect. After reviewing the CO₂ budget ECP, MassDEP will issue a proposed final approval, a denial, or a final approval with conditions. For CO₂ budget sources with an Operating Permit under 310 CMR 7.00: Appendix C, MassDEP will incorporate the CO₂ budget emission control plan into their Operating Permit in accordance with 310 CMR 7.00:Appendix C(8).

The proposed CO₂ Budget ECP requirements provide that MassDEP will:

- Notify the public of MassDEP's proposed action relating to the CO₂ budget ECP by publishing a notice in the Environmental Monitor;
- Make CO₂ budget emission control plan related materials available on the MassDEP website;
- Allow not less than 21 days for public comment; and,
- Make all comments available for public inspection.

M. Imports and Leakage

Leakage is the shift in generation and associated emissions from capped sources to non-capped sources. Leakage, if significant, could undermine the goals of the CO₂ cap-and-trade program. Generally, leakage is thought of as occurring via an increase in electricity imports from non-RGGI-MOU-signatory states, though it could also occur via an increase in electricity generation by small non-capped sources in RGGI MOU signatory states. Leakage can result from and/or be affected by any number of factors including: regulatory costs, transmission pricing, transmission capacity, transmission outages, relative fuel prices, reliability constraints, generating unit outages, generating capacity additions or shutdowns inside or outside the region, and meteorology.

For example, electricity tends to be generated at lower cost outside of the RGGI region. Therefore, if the transmission capacity between RGGI MOU signatory states and non-RGGI-MOU-signatory states is expanded, there could be increased electricity imports, and associated emissions leakage. Such imports could occur whether or not Massachusetts implemented the CO₂ Budget Trading Program.

MassDEP does not believe that the threat of leakage is sufficient to delay implementation of the CO₂ Budget Trading Program. However, MassDEP does believe that it is appropriate to monitor temporal changes in in-region generation and in-region load, and therefore supports the on going effort to modify existing grid data systems (i.e., GATS²¹ & GIS²²) to enable those systems to provide this data. MassDEP will continue to evaluate strategies to mitigate potential emissions leakage in conjunction with the RGGI MOU signatory states.

IV. Economic Impacts

The original nine RGGI states jointly hired a consulting firm, ICF, to use its Integrated Planning Model (IPM) to project the economic impacts of RGGI under a variety of scenarios. The scenarios differ in factors such as national market prices for fossil fuels, growth in electricity demand, whether or not a federal cap on emissions comes into being, and how much funding is made available for electric efficiency programs. The IPM model produced results for wholesale electric rates, which Massachusetts DOER used as input to REMI to determine regional macroeconomic impacts and also translated into retail rates and customer bill impacts. These results are available on the RGGI website, at <http://rggi.org/documents.htm>, in the summary documents section.

The macroeconomic impacts of RGGI are projected to be generally quite small in terms of impacts on employment, income, and gross regional product – generally one-tenth to one-hundredth of one percent reductions throughout the program duration. Under the scenario including a federal and Canadian carbon policy, the regional macroeconomic impacts were shown to be positive because electric generation in the northeast region is comparatively less coal intensive.

²¹ Generator Attribute Tracking System, data system for PJM. PJM Interconnection coordinates the movement of electricity through all or parts of Delaware, Illinois, Indiana, Kentucky, Maryland, Michigan, New Jersey, North Carolina, Ohio, Pennsylvania, Tennessee, Virginia, West Virginia and the District of Columbia.

²² Generator Information Systems, data system for ISO New England. ISO New England operates the system that supplies electricity through New England.

The retail electric price impacts were calculated for two of the later years,²³ 2015 and 2021 (the 2021 numbers reflect RGGI's requirement to cut emissions 10% from the baseline levels). For the baseline RGGI package scenario, which includes no increased spending for efficiency programs, residential and commercial bills, averaged over the RGGI region, are projected to rise 0.3% in 2015 and 0.6% in 2021; and industrial bills 0.7% and 1.2%.

However, the rate impacts can be greatly mitigated by selling or auctioning the RGGI allowances and using the funds to expand spending on energy efficiency programs. Although electric rates rise, projections estimate that a doubling of efficiency programs enabled by RGGI auction proceeds will cause consumption to fall, resulting in bills that are lower on average across all customers compared to business as usual (i.e., no RGGI). After considering these energy efficiency savings, average residential customer bills are estimated to decrease by 7% in 2015 and 12% in 2021. For commercial customers, bills are estimated to decrease by 4% in 2015 and 7% in 2021, and for industrial customers the bill reductions are estimated to be 2% in 2015 and 3% in 2021. Those customers that participate in the energy efficiency programs would expect greater overall cost reductions.

If both the U.S. and Canadian governments implement national caps on CO₂ emissions, customers in RGGI states will experience greater increases in electric rates than they would under RGGI alone. These greater increases in electric rates for the RGGI states would result because:

- Natural gas demand and prices would rise more under a US and Canadian CO₂ cap scenario than they would with only a northeast regional CO₂ policy; and
- The national caps prevent the “leakage” of low-priced coal-fired power into the RGGI MOU signatory states from other states or provinces because under the national cap scenario all areas would also be subject to the same price impacts as a result of the carbon cap.

However, under this scenario the entire nation experiences higher electric costs and the RGGI MOU signatory states would actually benefit economically relative to other regions due to their lower dependence on coal-fired power relative to the rest of the country.

The impacts of RGGI should also be considered in the context of other factors affecting electricity rates and bills, particularly the Forward Capacity Market (FCM) being run by the New England ISO that will provide increased payments to generators that bring new capacity online. While the effects of the FCM are uncertain, reasonable expectations are that it will have far greater impacts than will RGGI.

V. DESCRIPTION of PROPOSED AMENDMENTS to 310 CMR 7.29 and 310 CMR 7.00: Appendix B(7)

A. Review of Existing Regulations

310 CMR 7.29, *Emission Standards for Power Plants* establishes annual CO₂ emissions standards for the six highest emitting electric generating facilities (“affected facilities”).^{24, 25} Affected facilities must meet annual CO₂ emissions cap standards beginning January 1, 2006, and an annual CO₂ rate standard of 1,800 pounds CO₂ per megawatt hour beginning January 1, 2008. CO₂ emissions standards are facility-specific. This means that facilities must either comply with their emissions standards by: reducing out-of-stack CO₂ emissions, where necessary; by using Greenhouse Gas (GHG) Credits created for reduced, avoided, or sequestered emissions of GHGs; or by paying into a Greenhouse Gas Expendable Trust if certain triggers are met.²⁶

B. CO₂ Emissions Standard Applicability and GHG Credit Eligibility

²³ “The Impact of Energy Efficiency Measures Integrated with the RGGI Policy on Residential, Commercial, and Industrial Customer Consumption and Bills” (Revision 12/08/07), MA Division of Energy Resources.

²⁴ 310 CMR 7.29 also establishes facility-specific emissions standards for NO_x, SO₂, and Mercury.

²⁵ The six affected facilities are: Brayton Point, Salem Harbor, Mystic, Canal, Mt. Tom, and NRG Somerset.

²⁶ These triggers have not been met as of June 2007.

MassDEP is proposing that the CO₂ emissions standards of 310 CMR 7.29 will not apply to CO₂ emissions by affected facilities that occur on or after January 1, 2009, when the CO₂ Budget Trading Program commences. MassDEP requires that certain facilities participate in cap-and-trade programs for SO₂ and NO_x while simultaneously enforcing facility-specific emissions standards. However, MassDEP does not believe it would be appropriate at this time to similarly impose overlapping requirements for CO₂ given that there are currently no proven commercially available end-of-stack control technologies for CO₂.

As the CO₂ emissions standards of 310 CMR 7.29 will not apply to emissions that occur on or after January 1, 2009, GHG Credits will not be awarded for reduced, avoided, or sequestered emissions that occur after this date, unless the project meet the exchange criteria in “Transition Provisions – CO₂ Budget Trading Program Ineligible Projects” (below). To ensure that applicants for GHG Credits have sufficient time to complete their applications for certification and verification of GHG Credits, MassDEP proposes to allow applicants to submit applications until March 31, 2009.

C. Deadline for Compliance Demonstration

MassDEP is proposing to postpone (and combine) the 2007 and 2008 CO₂ compliance demonstration deadlines (from January 31 2008 and 2009) to September 1, 2009, in order to reduce the administrative burden on Mass DEP and the regulated facilities. Importantly, this should also provide additional compliance flexibility to affected facilities, which MassDEP believes is appropriate given the abbreviated nature of this program (i.e., it is now effectively a three-year program). Note that facilities would still be required to report CO₂ emissions for 2007 and 2008 by January 30, 2008 and 2009, respectively.

Because MassDEP has extended the compliance demonstration deadline five months past the date (March 31, 2009) that it is requiring the submittal of administratively complete applications for certification and verification of GHG Credits, MassDEP does not believe that it would be appropriate to continue to allow facilities to use certified, but unverified, GHG Credits when they demonstrate compliance with the CO₂ emissions standards of 310 CMR 7.29.

D. Transition Provisions – CO₂ Budget Trading Program Ineligible Projects

In an effort to balance commitments and investments in GHG Credit-generating projects with MassDEP’s desire to achieve the full benefits of the CO₂ Budget Trading Program, MassDEP is proposing that:

- CO₂ Budget Trading Program-eligible projects be eligible to receive GHG Credits for reduced, avoided, and sequestered emissions that occur through the end of 2012, so long as an administratively complete application for verification is submitted by March 31, 2013; and that,
- Unused GHG Credits from these projects be eligible for exchange with CO₂ Budget Trading Program CO₂ allowances at a 2:1 ratio (i.e., 2 GHG Credits may be exchanged for 1 CO₂ allowance) from January 1, 2009 to December 1, 2013.

The purpose of this exchange is to compensate early actors, and not to establish an alternative means for individuals to acquire CO₂ Budget Trading Program CO₂ allowances. Therefore, MassDEP proposes to constrain eligibility for this exchange to only those projects for which an administratively complete application for certification has been submitted on or before February 1, 2008.

MassDEP proposes to allow these projects to receive GHG Credits for reduced, sequestered, and avoided emissions of GHGs that occur through December 31, 2012 – nearly five years after MassDEP expects to finalize these regulations. MassDEP is proposing to require application for the exchange of GHG Credits for CO₂ allowances to be submitted by December 1, 2013 – eleven months after projects are no longer eligible to generate GHG Credits. This should provide applicants and MassDEP adequate time to develop and review applications for GHG Credits.

MassDEP proposes to commence the exchange of GHG Credits for CO₂ allowances when the CO₂ requirements of the Budget Trading Program commence on January 1, 2009.

A 2:1 exchange ratio was chosen because GHG Credits are not equivalent to CO₂ Budget Trading Program CO₂ offset allowances or CO₂ allowances. GHG Credits have more expansive eligibility criteria than CO₂ offset allowances. While currently CO₂ offset allowances may only be created for five different project categories,²⁷ GHG Credits can be created for virtually any project that reduces, avoids, or sequesters emissions of greenhouse gases.²⁸ Furthermore, while GHG Credits can be used without limit to demonstrate compliance with 310 CMR 7.29, only a small fraction of a facility's compliance under the CO₂ Budget Trading Program may be satisfied with CO₂ offset allowances.²⁹ GHG Credits are also not equivalent to CO₂ allowances, which constitute the state budget and can be used without limit under the CO₂ Budget Trading Program.

MassDEP intends to make sufficient CO₂ allowances available to exchange all eligible GHG Credits without prorating. Therefore, to satisfy expected demand for CO₂ allowances via this exchange mechanism, MassDEP is proposing to annually set aside approximately 1% of its budget (266,602 CO₂ allowances) in a GHG Credit Exchange Set-aside through 2012. The size of this set-aside may be adjusted up or down before the promulgation of the final rule to reflect changes to the maximum anticipated demand for CO₂ allowances.

In the event that CO₂ allowances remain in this set-aside after all eligible GHG Credits have been exchanged, MassDEP proposes to transfer such allowances into the Massachusetts Auction Account and subsequently auction those CO₂ allowances.

E. Transition Provisions – CO₂ Budget Trading Program Eligible Projects

For projects eligible for CO₂ offset allowances under the CO₂ Budget Trading Program, applicants may apply for GHG Credits or CO₂ offset allowances until March 31, 2009. After March 31, 2009, applicants may no longer apply for GHG Credits. GHG Credits awarded for CO₂ Budget Trading Program eligible projects may not be exchanged for CO₂ allowances. However, applicants may apply for CO₂ offset allowances for reduced or sequestered GHG emissions for which they received GHG Credits, provided that those GHG Credits have not been used to demonstrate compliance with 310 CMR 7.29.³⁰ Note that applicants for CO₂ offset allowances must still meet all of the requirements of the CO₂ Budget Trading Program's offset provisions (310 CMR 7.70(10)), including third party verification. MassDEP has added clarifying language to this effect in its CO₂ Budget Trading Program. However, this clarifying language has not been added to the rule of other RGGI MOU signatories, and therefore it is unclear how projects based in these states would be treated at this time. MassDEP is currently discussing this matter with those states.

F. Geographic Scope

At this time, projects are only eligible to receive GHG Credits if they occur within a limited geographic domain (i.e., Connecticut, Delaware, Maine, Massachusetts, Maryland, New Hampshire, New Jersey, New York, Vermont,

²⁷ At this time, only the following project categories are eligible for CO₂ offset allowances: landfill gas methane capture and destruction; avoidance of SF₆ emissions; afforestation; natural gas, oil, or propane end use efficiency improvements; and, agricultural manure methane management.

²⁸ Note that projects must meet all of the criteria established in 310 CMR 7.00: Appendix B(7), and that the following categories are explicitly ineligible: nuclear power generation; under-water and under-ground sequestration; and over-compliance with the cap and rate limitations of 310 CMR 7.29 by affected facilities.

²⁹ Initially only 3.3% of a facility's compliance obligation may be met by CO₂ offset allowances. However, that fraction may be expanded to 5% and 10% of a facility's compliance obligation if certain triggers are met.

³⁰ Note that according to 310 CMR 7.00: Appendix B(7), GHG Credits can only be used to demonstrate compliance with 310 CMR 7.29.

or the coastal waters thereof). MassDEP is proposing to expand this list to include Rhode Island, a recent RGGI MOU signatory.

Several affected facilities and brokers have suggested that there is an insufficient supply of offset projects that meet the criteria of 310 CMR 7.00: Appendix B(7) within the current geographic domain. Note that while no facilities exceeded their CO₂ emissions standards in 2006, the more stringent CO₂ emissions rate standard of 1,800 pounds CO₂ per megawatt hour takes effect on January 1, 2008, and therefore significant demand for GHG Credits is likely to materialize.

MassDEP solicits comment as to whether there are sufficient projects in the initial geographic domain, and if not, whether MassDEP should expand the geographic scope nation-wide or world-wide.

Because it may be more resource intensive for MassDEP to certify and verify projects that occur outside of the region (i.e., the initial geographic scope), and to encourage regional projects, MassDEP is proposing to increase the size threshold for projects that occur outside the initial geographic scope (as amended to include Rhode Island) from 5,000 tons of CO₂e (carbon dioxide equivalent) per year over the certification period, to 20,000 tons of CO₂e. MassDEP is also proposing amendments that would allow it to reduce the size threshold for offset projects using the Commissioner's Trigger (Circuit Breaker Mechanism).

VI. Request for Comments

MassDEP solicits comments on any of the provisions set forth in the proposed 310 CMR 7.70 and on the amendments proposed to 310 CMR 7.29 and 310 CMR 7.00: Appendix B(7).

VII. Agricultural Impacts

Pursuant to Massachusetts General Laws, Chapter 30A, Section 18, state agencies must evaluate the impact of proposed programs on agriculture within the Commonwealth.

The proposed regulations are not expected to have any negative impacts on agricultural production in Massachusetts. Awarding CO₂ offset allowances for agricultural manure management should have positive impacts on agricultural production. Furthermore, climate change is expected to cause a number of negative impacts on agricultural production. Therefore, any mitigation of these impacts that results from the implementation of these regulations would benefit the agricultural sector in Massachusetts.

VIII. Impact on Massachusetts Municipalities

The proposed regulation primarily affects large power generators and industrial units. Only three cities in Massachusetts have municipal power plants that are subject to the proposed CO₂ Budget Trading Program, Braintree, Peabody, and Taunton. These three facilities will need to purchase CO₂ allowances to comply. However, ownership and operation of a power plant, which many municipalities voluntarily undertake, is not a mandated municipal service. Therefore, costs associated with operation of a power plant are not mandated costs subject to the restrictions of Proposition 2 ½ (Town of Norfolk v. Department of Environmental Quality Engineering, 407 Mass 233 (1990)).

The proposed regulations may have positive impacts on cities and towns that can earn CO₂ Budget Trading Program CO₂ offset allowances by implementing offset projects, such as energy efficiency projects in schools or other public buildings. These CO₂ offset allowances may be sold to help cover the costs incurred from implementing the project or other municipal costs.

IX. Massachusetts Environmental Policy Act

These proposed regulations are “categorically exempt” from the “Regulations Governing the Preparation of Environmental Impact Reports,” 301 CMR 11.00, because the proposed regulations will result in reduced levels of emissions. All reasonable measures have been taken to minimize adverse impacts.

X. Impacts on Other Programs – Air Toxics

Air toxics are a group of chemical air contaminants that are associated with significant environmental impacts or adverse health effects such as cancer, reproductive effects and birth defects. The federal Clean Air Act requires EPA to promulgate source-specific controls based on Maximum Achievable Control Technologies (MACT) for air toxics. MassDEP implements MACT standards as EPA promulgates them. In addition, MassDEP controls air toxics through reductions of criteria pollutants and through its Toxics Use Reduction Program. Toxics use reduction is a MassDEP priority. Toxics use reduction is defined as in-plant practices that reduce or eliminate the total mass of contaminants discharged to the environment. The proposed regulation will promote toxics use reduction by encouraging the generation of renewable energy and promoting energy efficiency at existing electric generating units and offsite (CO₂ emissions offset projects).

XI. Public Participation

As provided by state law, MassDEP gives notice and provides the opportunity to review the proposed 310 CMR 7.70, *CO₂ Budget Trading Program*, amendments to 310 CMR 7.29, *Emissions Standards for Power Plants*, amendments to 310 CMR 7.00: Appendix B, *Emissions Banking, Trading, and Averaging*, the background document, and any technical information, at least 21 days prior to holding a public hearing. Formal notice will be issued 30 days before the public hearings. The hearings will be held in accordance with the procedures of MGL Chapter 30A. A copy of the proposed 310 CMR 7.70 and proposed amendments to 310 CMR 7.29 and 310 CMR 7.00: Appendix B(7) are available on MassDEP’s website at: <http://www.mass.gov/dep/>. Copies can also be obtained at MassDEP’s headquarters at One Winter Street, Boston 02108 as well as each MassDEP regional office.

If there are any questions regarding this document, please contact Bill Lamkin or Nicholas Bianco at:

Bill Lamkin
William.Lamkin@state.ma.us
978-694-3294
MassDEP
205B Lowell St.
Wilmington, MA 01887

Nicholas Bianco
Nicholas.M.Bianco@state.ma.us
617-292-5705
MassDEP
Bureau of Waste Prevention
1 Winter St.
Boston, MA 02108

MassDEP expects to hold hearings related to these regulation changes across the Commonwealth during the second week of September 2007.